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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,017	08/21/2000	Jes Thyssen	50944.8500/99RSS219	8562

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EXAMINER

AZAD, ABUL K

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/643,017

Applicant(s)

THYSSEN, JES

Examiner

ABUL K. AZAD

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8, 11, 20, 22 and 24-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 11, 20, 22 and 24-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is in response to the communication filed on January 8, 2003.
2. Claims 8, 11, 20, 22 and 24-47 are pending in this action. Claims 8, 11, 20 and 22 have been amended. Claims 1-7, 9-10, 12-19, 21 and 23 have been canceled. Claims 24-47 have been newly added.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 11, 20, 22, 24-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gersho et al. (US 6,233,550) in view of Ertem et al. (US 6,453,289).

As per claim 8, Gersho teaches, "a method for classifying a speech signal, the method comprising the steps of:"

"extracting a parameter from the speech signal" (Fig. 4A, element 14, parameter is extracted by LP analysis);

"comparing the noise-free parameter with a pre-determined threshold" (col. 19, lines 24-36);

"associating the speech signal with a class in response to the comparing step" (col. 19, lines 24-36).

Art Unit: 2654

Gersho does not explicitly teach, "estimating a noise parameter and removing the noise component from the parameter to generate a noise-free parameter". However, Ertem teaches, "estimating a noise parameter and removing the noise component from the parameter to generate a noise-free parameter" (col. 3, lines 28-49, reads on "noise reduction algorithm can be implemented in a pre-compression mode . . ."). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove background noise in a pre-compression mode as taught by Ertem in the invention of Gersho because Ertem teaches reduction of background noise levels can mitigate several problems and enhance overall performance of the speech communication system (col. 1, lines 12-20).

As per claim 11, Gersho teaches, "wherein a plurality of parameters are extracted to classify the speech" (col. 19, lines 24-36, here plurality of parameters are spectral tilt, rate of zero-crossing, energy and residual peakiness etc.).

As per claim 24, Gersho teaches, "wherein the plurality of parameters include a spectral tilt parameter, a pitch correlation parameter and absolute maximum parameter" (col. 19, lines 24-36).

As per claims 25, 27 and 28, Gersho does not explicitly teach:

"wherein the removing step removes the noise component from each of the plurality of parameters to generate a plurality of noise-free parameters";

"wherein the step of removing the noise component includes applying weighting to the parameter";

"wherein weighting the parameter includes subtracting a background noise contribution".

However, Ertem teaches:

"wherein the removing step removes the noise component from each of the plurality of parameters to generate a plurality noise-free parameters" (col. 4, lines 36-64);

"wherein the step of removing the noise component includes applying weighting to the parameter" (col. 7, lines 1-20);

"wherein weighting the parameter includes subtracting a background noise contribution" (col. 8, lines 25-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove background noise in a pre-compression mode as taught by Ertem in the invention of Gersho because Ertem teaches reduction of background noise levels can mitigate several problems and enhance over all performance of the speech communication system (col. 1, lines 12-20).

As per claim 26, Gersho teaches, "wherein the comparing step compares each of plurality of noise-free parameters with each of a plurality of a corresponding pre-determined threshold" (col. 18, line 59 to col. 19, line 14, the classification data is trained manually before the testing).

As per claim 29, Gersho teaches, "wherein the threshold is unaffected by the background noise contribution" (col. 18, line 59 to col. 19, line 14, the classification data

Art Unit: 2654

is trained manually before the testing, therefore threshold is unaffected by the background noise).

As pre claims 20, 22, 30-47, they are interpreted and thus rejected for the same reasons set forth in the rejection of claims 8, 11 and 24-29.

***Response to Arguments***

5. Applicant's arguments with respect to claims 8, 11, 20, 22, 24-47 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2654

**Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-3838**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richemond Dorvil**, can be reached at **(703) 305-9645**.

Any response to this action should be mailed to:

**Commissioner for Patents**

**Washington, D.C. 20231**

Or faxed to:

**(703) 872-9314**

(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center's Customer Service Office whose telephone number is **(703) 306-0377**.

  
Abul K. Azad

August 11, 2003

 8/11/03

**VIJAY CHAWAN  
PRIMARY EXAMINER**